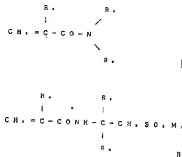


- (54) **AD MIXTURE FOR EXTRUSION-MOLDING ASBESTOS-FREE CEMENT**
 (11) 4-182333 (A) (43) 29.6.1992 (19) JP
 (21) Appl. No. 2-309101 (22) 14.11.1990
 (71) DAI NIPPON KOGYO SEIYAKU CO LTD (72) TADAAKI SHIMOMURA(1)
 (51) Int. Cl. C04B14/46, C04B16/02, C04B24/26, C04B28/02, C04B14/46, C04B16/02, C04B24/26

PURPOSE: To attain surface smoothness of a molded article and to exhibit an excellent extrusion-molding function by using an admixture for extrusion-molding asbestos-free cement consisting of specified acrylic polymer and cellulose derivative.

CONSTITUTION: From 99.9 to 30mol% of a compd. shown by formula I (R_1 is H or CH_3 , and R_2 and R_3 are H or lower alkyls) and 0.1-70mol% of a compd. shown by formula II (R_4 is H or CH_3 , R_5 and R_6 are H or lower alkyls, and M_1 is H, alkali or NH_4) are copolymerized, and 5-50wt.% of a water-soluble or dispersible acrylic polymer with the viscosity of its 0.2% soln. in 4% aq. NaCl soln. at 25°C measured by a rotational viscometer controlled to 1-15cp and 95-50wt.% of a water-soluble or dispersible cellulose derivative (e.g. alkylcellulose) are added to the copolymer to obtain the admixture.



- (54) **SELF-HARDENING FILLING-BACK MATERIAL**
 (11) 4-182334 (A) (43) 29.6.1992 (19) JP
 (21) Appl. No. 2-311398 (22) 19.11.1990
 (71) TOKYU CONSTR CO LTD (72) SHINICHI TAMAI(5)
 (51) Int. Cl. C04B18/08, C04B24/16, C04B28/02, C04B18/08, C04B24/16

PURPOSE: To improve fillability, corrosion resistance and suitability to re-excavation by mixing fly ash, clinker ash, cement, a thickener and a foaming agent with water.

CONSTITUTION: Water is mixed with a foaming agent such as sulfuric ester of higher alcohol and further mixed with a thickener such as a cellulose ester-based thickener, cement such as common Portland cement, fly ash and clinker ash to obtain the title material having ≥ 30 cm table flow value stipulated by JIS.

- (54) **PRODUCTION OF SELF-HARDENING FILLING-BACK MATERIAL**
 (11) 4-182335 (A) (43) 29.6.1992 (19) JP
 (21) Appl. No. 2-311399 (22) 19.11.1990
 (71) TOKYU CONSTR CO LTD (72) SHINICHI TAMAI(5)
 (51) Int. Cl. C04B18/08, C04B24/16, C04B28/02, C04B18/08, C04B24/16

PURPOSE: To improve flowability, corrosion resistance and suitability to re-excavation by mixing water with a foaming agent and further mixing the mixture with a thickener, cement, fly ash and clinker ash.

CONSTITUTION: Water is mixed with a foaming agent such as sulfuric ester of higher alcohol and further mixed with a thickener such as a cellulose ester-based thickener, cement such as common Portland cement, fly ash and clinker ash to obtain a self-hardening filling-back material having ≥ 30 cm table flow value stipulated by JIS.